DOCUMENT RESUME

ED 161 381 HE 010 567

AUTHOR Lenning, Oscar T.
TITLE A Conceptual Framework for Identifying and Assessing Needs in Postsecondary Education. AIR Forum Paper 1978.
INSTITUTION Western Interstate Commission for Higher Education, Boulder, Colo. National Center for Higher Education Management Systems.
PUB DATE 22 May 78
NOTE 23p.; Paper presented at the annual Association for Institutional Research Forum (18th, Houston, Texas, May 21-25, 1978) ; Best copy available; Figure 1 may be marginally legible

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *College Planning; Decision Making; Educational Needs; Educational Objectives; *Information Needs; Information Utilization; *Institutional Research; Literature Reviews; *Models; Needs; *Needs Assessment; *Postsecondary Education; Problems; Resource Allocations
IDENTIFIERS *Planning Methods

ABSTRACT

In order to sort out a comprehensible total picture regarding needs assessment and to develop a useful conceptual framework for this area, a comprehensive review of the needs assessment literature pertinent to the concerns of postsecondary education was conducted. The review found that needs assessment is a viable tool for input to planning, but serious problems exist. These include: (1) lack of a good definition of need; (2) difficulty in separating real need from wants and demands; (3) lack of valid and reliable measures and indicators of met and unmet need; (4) lack of useful taxonomies of needs; (5) tendency of many needs assessors to be imprecise about whose needs are of concern, and to not consider different groups separately; (6) tendency to focus on goals in needs assessment rather than let needs data help the institution evaluate and reformulate its goals; (7) tendency to be imprecise concerning which decisionmakers will use the needs data, and how; (8) failure to make use of relevant secondary data and to overcome the possible pitfalls inherent in such data; (9) difficulty of integrating "soft" with "hard" data; and (10) the tendency to make decisions using over-simplified decision rules. This information provides a framework to assist in overcoming such problems and for evaluating needs assessment models. (Author/JMD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED161341

THE ASSOCIATION FOR INSTITUTIONAL RESEARCH

This paper is part of the ERIC Collection of 1978 Association for Institutional Research Forum Papers. All papers in the Collection were recommended for inclusion by the AIR Forum Publications Review Committee.

Robert H. Fenske
Arizona State University
(Editor, AIR Forum Publications)

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

AIR

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

HE 010 567

A CONCEPTUAL FRAMEWORK FOR IDENTIFYING AND ASSESSING NEEDS IN POSTSECONDARY EDUCATION

Oscar T. Lenning
Senior Staff Associate
National Center for Higher
Education Management Systems
P.O. Drawer P
Boulder, Colorado 80302
303/492-8465

Paper Presented at the Session "Balancing Needs and Resources," Association for Institutional Research Annual Forum, Houston, Texas, May 22, 1978.

ABSTRACT

Most college needs assessment efforts in the past have been subjective, unsystematic, and ad hoc. A significant body of knowledge is now available, however, that can help institutions to identify and evaluate constituent needs in a much more effective manner.

Needs assessment is a viable tool for input to planning, but serious problems exist. For example: (1) lack of a good defination of need; (2) it is difficult to separate "real need" from wants and demands; (3) lack of valid and reliable measures and indicators of met and unmet need; (4) the lack of useful taxonomies of needs; (5) the tendency of many needs assessors to be imprecise about whose needs are of concern, and to not consider different groups separately; (6) the tendency to focus on goals in needs assessment rather than let needs data help the institution evaluate and reformulate its goals; (7) the tendency to be imprecise concerning which decisionmakers will use the needs data, and how; (8) the failure to make use of relevant secondary data and to overcome the possible pitfalls inherent in such data; (9) the difficulty of integrating "soft" with "hard" data; and (10) the tendency to make decisions using over-simplified decision rules.

All current needs assessment models generate statements of need, and many of them rank order the identified needs. Yet hardly any of them develop diagnostic statements and inferences about need causes, which are necessary if one is to really understand the different needs and how to best meet them. This paper provides a preliminary conceptual framework designed to assist in overcoming such problems as those listed above, and for evaluating needs assessment models.

All social programs in our society are in response to assumed or perceived needs, although observers wonder sometimes whether it is not the needs of the provider (for financial support, for nonpecuniary benefits such as status and prestige, for survival, for growth, etc.) rather than the needs of the receiver of the services that primarily stimulate social services into happening. The concept of need is clearly an integral part of our culture. Most of the great litarary classics are built around needs and how they are or are not met. Satisfying important human needs is the central theme of almost all commercial advertising, political lobbying and advocacy, and educational jargon.

Given that the concept of "need" is a primary driving force within education, including postsecondary education, the focus naturally turns to the analysis of which needs are most important, which are most feasible to meet, or which should receive priority attention in determining how available educational funds and other resources (such as staff, facilities, methodologies) should be expended. And during a period of projected enrollment decline and probable financial retrenchment, an objective analysis of needs becomes especially important for discerning which areas to maintain and which to cut back. Thus, the theme of the 1978 Forum of the Association for Institutional Research is "Balancing Needs and Resources." To insure such a balance, it is important to identify and assess effectively both the needs and the resources available. On the one end, however, there are serious difficulties related to identifying and assessing needs in postsecondary education - whether it be needs at the institutional, the state, or the national level.

It is only recently that postsecondary education people, other than those in the community colleges, have expressed much interest in conducting formal,

---

*Paper presented at the session "Balancing Needs and Resources," Association for Institutional Research Annual Forum, Houston, Texas, May 22, 1978.

objective studies to identify and assess needs. Fortunately, however, a significant body of knowledge about what has been called "Needs Assessment" has been developed over the last decade by educators at the elementary and secondary levels, from which postsecondary educators can borrow. Furthermore, noteworthy developmental work is also now taking place in postsecondary education.

In spite of the developments that have taken place and the needs assessment models that have been developed, needs assessment is still a largely undeveloped area - for example, see the discussion by Witkin (1975). Many of the developmental efforts have been "piecemeal," and a conceptual framework that can tie all of the pieces together and guide practice has been missing. Therefore, from April through October of 1978, NCHEMS staff conducted a comprehensive review of the needs assessment literature pertinent to the concerns of postsecondary education. The purpose of this effort was to sort out a comprehensible total picture regarding needs assessment and to develop a useful conceptual framework for this area. Unexpectedly, several hundred relevant literary sources were identified. This paper is based on the review of that comprehensive literature search (Lenning, Cooper, and Passmore, forthcoming).

The demand for systematic, objective, and concrete needs assessment information will undoubtedly increase as rational planning models become more widely used within postsecondary education institutions and agencies. The ability to objectively assess needs and to effectively translate them into institutional and program responses will thus be expected to become increasingly more important in the years ahead. It is hoped that this preliminary formulation of a conceptual framework for needs assessment will lead to increasingly more-refined conceptual formulations and improved assessment models that will be useful for needs assessment efforts in postsecondary education.

The Concept of Need

A major problem in the area of needs assessment has been the lack of a good definition of need. Conceptions of need that are expressed in the various literature are not consistent, and often they are vague and nonspecific. Almost all needs assessment models have used a "discrepancy" definition, but as illustrated by Coffing and Hutchinson (1970), such a definition is too limited in its focus. Scriven (1977) cites the problem in colorful terms:

> Needs assessments have been for some time the most ludicrous spectacle in evaluation. The usual "models" are farcical and decisions based on them are built on soluable sand. One sign of the extent of the problem is the failure to begin with a tolerable definition of need....Is a need a discrepancy between the actual and the ideal (a formula I used to like)? No, because we often need to improve and know how to, without knowing what the ideal would be like. There is some attraction about adding the requirement that x must be feasible, since it seems odd to say that one could need something that wasn't possible. But that would eliminate the motivation for, e.g., medical breakthroughs....[P. 25]

Different Aspects of the Concept of Need

Needs are viewed in different ways by those in the various disciplines. For example, in the fields of biology, physiology, and medicine needs are interpreted in terms of what will contribute to the efficient and effective functioning, and the survival and growth, of the human organism. Educators also tend to view needs in terms of individuals, but the focus here is more often on effective and efficient functioning, survival, and growth within the community or society. In psychology needs are largely interpreted in terms of the perceptions of individuals. Psychologists usually view need as a learned construct (taught or based on natural experience) used to indicate a perception of disequilibrium or unsatisfactory condition for which pressure/need exists to right the situation. Another way to state this is that need is a personal tension and means appropriate for meeting a desirable goal or condition, as perceived by an individual.

Some psychologists would broaden this to include groups of people, and they construe it as a force that pressures a person or a group to reduce or eliminate the discrepancy between what is perceived as desired and what perceptions or experiences indicate is currently the case. Sociologists, in turn, focus more on groups and society. They see needs as indicators of problems that must be solved, plus types and levels of competence and roles (and their integration) that must occur, for individuals, groups, and organizations to function effectively as social units, and within a social community or society at large.

All of the above are legitimate types of needs that must be included in any generic definition of needs for use in postsecondary education. The discrepancy definition of need guiding almost all formal needs assessment efforts and models up until now - the amount of discrepancy or gap that must be filled, through increased fulfillment or lowered threshholds of desirability, in order to bring the actual level of fulfillment (in terms of processes, procedures, conditions, outcomes, or results) up to the ideal level or condition - does not meet this condition. Neither does Coffing and Hutchinson's (1974) proposed alternative that need is a desired condition or state that may or may not be the current condition. Scriven (1977) was also bothered by the commonly accepted discrepancy concept of need, and proposed a formula as a definition:

> z needs x = z would (or does) significantly benefit from x and z is now (or would be, without x) in an unsatisfactory condition. (p. 25).

To illustrate this definition, let us suppose that z represents a college student, and x represents the particular knowledge and skills necessary to obtain a job. If we say that the student NEEDS the knowledge and skills in order to obtain a job, we mean that:

(a) the student would (or does) significantly benefit from the knowledge and skills,

(b) the student is now (or would be, without the knowledge and skills) in an unsatisfactory condition.

Scriven's definition adds important new clarifications, as he points out in his rationale:

> . . . at least it avoids the usual fallacies of a definition--explicit or implicit--of need in terms of wants or preferences (children may need a cavity filled but they certainly don't want it done; conversely, people may think they need laetrile or CAI with Braille keys but it doesn't follow that they do.) Do you need a million dollars? No. Would you significantly benefit from it? Yes. Hence we can't omit the second clause in the definition, which reminds us that needs are (typically) necessities not luxuries. (p. 25)

Scriven above makes the important point that wants or preferences are not the same thing as needs. Needs may be present that people do not recognize because of a lack of knowledge, because the need is being fulfilled and there is no discrepancy, or because it is being masked by other needs that demand attention. Similarly, a person may want something merely so someone else cannot have it, for the purpose of attracting attention, or because others have it. A want in such a case may be an expression of needs, but not the need expressed directly by the want (the expressed need is not the real need.) Therefore, most marketing research efforts and educational needs assessments are incorrect when they equate opinions, expressed desires, wants, or demands to needs. This is not to negate the usefulness of such information, which may provide good indications of needs that are present, and, especially if the wants are referred to by respondents in severe and critical terms (McGrath, 1970; Taylor, Vinebery, and Rufford, 1974.) But equating wants to needs causes people to not look for other types of information that could confirm whether those wants are valid and reliable indicators of need.

A New Definition of Need

All of the definitions mentioned in the preceding section are legitimate concepts of need, and each defines a particular kind of need. Thus, what is called for is a definition that is broad or generic enough to include all of those specific types of need and show how they relate to one another. Lenning, Cooper, and Passmore (forthcoming) have proposed a new definition of need that they believe has some validity in this respect:

> A NEED is a necessary or desirable condition, state or situation--whether it be an end result that is actuality (met need) or a discrepancy that should be closed between a current or projected actuality and a necessary or highly desirable end result (unmet need)--as judged by a relevant person or group using multiple objective criteria that have been agreed upon.

This definition is a combination of discrepancy and level of necessity, where the amount of need varies directly with level of necessity and inversely with amount of discrepancy. Therefore, both of the following statements of need are valid according to this definition: "our students' needs for job information and employer contacts are well taken care of by the placement office on this campus," but "they have a serious need for more counseling prior to their interviews with prospective employers." This definition is also congruent with Burton and Merrill's (1977) observation that solutions in cases of unfulfilled (unmet) needs can involve both increased fulfillment and lowered threshholds of desirability or satisfaction.

This definition is pertinent to all of the different types of need outlined in the following section. It is also pertinent whether one is referring to needs: of prospective or enrolled students, of the college or program, of faculty or staff, of the local community or of the region, of the state or nation, or of society at large or other entities and groups. It also allows persons to speak in terms of past tense, current tense, and future tense when talking about needs: former needs, current needs, or projected

needs.

According to this definition, it is proper to use self report of wants as an indicator of need, but the self report must have been gathered in an objective, unbiased manner, and there must also be other supporting evidence. Multiple sources of evidence, or multiple criteria as this is called in the definition, will normally lead to increased assurance of actual need (increased reliability and validity) if objectivity is of paramount concern when gathering each type of evidence.

This definition still has a potential problem in that it does not specify when the necessity or desirability becomes significant enough to be classified a need, or when the discrepancy between fulfillment and unfulfillment becomes significant enough to warrant that the need is partially unmet. This is in fact necessary, however, if it is to be generic in nature and apply to all of the types of need that have been identified by different people. On the other hand, the definition does indicate that this is properly determined by the judgement of a relevant person or group (who is a relevant person or group depends on the situation) using multiple, objective, agreed upon criteria (who must reach agreement is not specified, but once again it varies with the situation).

Types of Outcomes for Whom

If one is going to attempt to identify and assess needs, it is important to be very clear about whose needs are of concern. The tendency of needs assessors has been to not be specific enough about whose needs are being identified and analyzed, and to not separately consider the needs of specific subgroups. Similarly, needs assessors too often do not deliniate ahead of time which specific types of needs are of concern to them.

Whose Needs Are of Concern?

As mentioned earlier, the focus of a needs assessment study can be on needs within the institution (for example, courses, programs, departments, enrolled students, faculty, or administrators) or outside of the institution (for example, prospective students, groups or organizations within the local community or the state, or society at large). It is important to delineate at the earliest stages of the study exactly whose needs are of concern (where "whose" could even include entities like organizations and the ecological environment).

A comprehensive, two-level classification of groups and entities for which someone in postsecondary education might want to assess needs was developed as a part of the NCHEMS Outcomes Structure (Lenning et al, 1977). It is presented in Figure 1. The focus there was on "audiences," the persons, groups, or other entities that could potentially receive or be affected by postsecondary education outcomes. Various needs assessments have been conducted for many of these groups and communities.

The listing of Figure 1 does not provide the detailed third-level categories needed for many outcomes studies at the institutional and program levels. The reason additional levels of detail are not included is that any further subdivisions could be based on several equally valid factors, and one user of the Structure would want one breakdown, while another person with a different philosophy, problem, and context would want a second breakdown. For example, students within a program could be usefully subdivided into: (1) those majoring in the program versus those only taking courses in the program, (2) age groupings, (3) commuter students versus resident students, (4) underclassmen versus upperclassmen, (5) groupings according to disadvantaged status, (6) men and women, (7) groupings according to life and career goals or

Figure 1

CATEGORIES OF PERSONS, GROUPS, AND OTHER ENTITIES OF POSSIBLE CONCERN IN ASSESSMENTS OF NEEDS[a]

10. *Individual/Group Clients*—This category refers to persons or groups of persons who are direct clients of the postsecondary education unit of concern and/or their immediate associates, such as family and relatives or peers.

    11. *Students*—Individuals or groups of individuals who currently are enrolled in the program, institution, or system of postsecondary education.

    12. *Former Students*—Individuals or groups of individuals who formerly were enrolled in the program, institution, or system of postsecondary education.

    13. *Family and Relatives of Students or Former Students*

    14. *Peers and Associates of Students or Former Students*

    15. *Faculty*

    16. *Staff Other than Faculty*

    17. *Other Individual/Group Clients*—An example would be an individual who is none of the above but is served by an advisory service offered by the college.

20. *Interest-Based Communities*—This category refers to large groups that are identified as entities working toward a *well-defined interest or mission.*

    21. *Private Enterprise Communities*—Communities where a major purpose is financial remuneration and profit—for example, corporations, small businesses, and farmers.

    22. *Association Communities*—Communities where members belong on the basis of affiliation rather than employment, such as unions and professional societies.

    23. *Government Communities*—Communities designed to administer government regulations and services, such as city hall, state department of education, and legislative communities.

    24. *Nongovernmental/Public Service Communities Other than the Institution Producing the Outcome*—Nonprofit service organizations, such as schools, hospitals, welfare agencies, philanthropic foundations, colleges (other than the college producing the outcome), and research organizations.

    25. *Institution or Institutional Unit Producing the Outcome*—The postsecondary education institution and/or units within that institution that are perceived as the producer/facilitator of the outcome(s) of concern.

    26. *Other Interest-Based Communities*—An example would be an ad hoc coalition task force of representatives from two or more of the above areas.

30. *Geographic-Based Communities*—This category refers to large groups defined on the basis of *functional territorial boundaries.*

    31. *Local Community*—A township, city, county, metropolitan area, or other type of locality having particular boundaries. It is not necessarily restricted to the legal or jurisdictional boundary, but the functional one in which the impact of the institution is (or should be) directly and physically felt. The boundaries will vary with the institution/program and outcome of concern.

    32. *The State*

    33. *A Region*—An aggregation of states or parts of states.

    34. *The Nation*

    35. *An International Community*

    36. *Other Geographic-Based Communities*—An example would be a research discovery that affects primarily people living in the coldest latitudes, or where it snows heavily.

40. *Aggregates of People*—This category refers to subpopulations of people *distinguished by particular characteristics that may indicate common concerns, needs, or wants,* but who do not necessarily have a common interest or mission, and therefore do not constitute communities.

    41. *Ability Level Subpopulations*—Subpopulations defined according to level of ability/proficiency on general intellectual functioning or specific skills—for example, gifted, typical, disadvantaged, or skilled, semi-skilled, unskilled.

    42. *Age Subpopulations*

    43. *Educational Level Subpopulations*

    44. *Income Level Subpopulations*

    45. *Occupation Subpopulations*

    46. *Physical Disability Condition Subpopulations*

    47. *Race Subpopulations*

    48. *Sex Subpopulations*

    49. *Other Such Aggregates*

50. *Other Audiences*—Examples would be the natural environment that is affected by university-sponsored research (which in turn would be expected to have impacts on audiences such as individuals and communities) and populations of animals (such as the animals affected by efforts to keep depleted species from becoming extinct or by the development of veterinary medicines).

---

[a]Reprinted from Lenning, Lee, Micek, and Service (1977, p. 24), where the focus was on audiences - individuals, groups, communities, organizations, etc. receiving or being affected by particular outcomes of conern.

Most needs assessments at the elementary and secondary education level have focused on the needs for particular educational outcomes. Needs for outcomes are important in postsecondary education also, and there are many types of potentially important outcomes on which one could focus. Lenning (1977b) has reviewed the literature for categorizations of outcomes and related concepts such as goals, and found almost 90 of them, some focusing on outcomes for individuals, some on outcomes for society, and some for both. Based on that review and other work, a comprehensive taxonomy of types of postsecondary education outcomes was developed (Lenning et al, 1977, pp. 55-66), which can be used in planning and developing items for a needs assessment survey questionnaire.

Needs for particular outcomes imply needs for process activities. For example, student outcomes needs may suggest a need for special methodologies, environments, faculty-student ratios, teaching strategies, instructors, innovative techniques, etc. Such process needs can also usefully be focused on directly, not merely inferred from assessed needs for particular outcomes. In addition, there are needs in postsecondary education that are less directly related to outcomes, and which elementary and secondary educators tend not to be concerned, such as needs for financial aid, needs for information about institutions and programs, and needs for lodging facilities.

When assessing needs, the focus can be broad or general and diffused ("wide-band study") or it can be concentrated or specific and detailed ("narrow-band study"). The wide-band study will be concerned with broad categories of needs while the narrow-band study will be concerned with specialized and detailed need categorizations. Lenning, Cooper, and Passmore (forthcoming) have identified a number of different need type classifications, some of them broad-band in focus (e.g., Maslow's [1968] need hierarchy, Parsons'

[1950] community need categories, and Bradshaw's Taxonomy of Social Need [1972]) while others have a narrow-band focus (e.g., Murray's [1978] categories of manifest and latent needs, Kinnick's [1975] Taxonomy of Information Needs of Prospective Students, and the Mooney Probelem Checklist scales [Pagels, 1973]).

Many of the categorizations of needs that have been developed place needs into categories along a continuum on a particular dimension. Examples of such dimensions are: developmental tasks corresponding to chronological age, basic versus learned (or derived) needs, personal versus social problems resulting in needs, maintenance versus incremental needs, conscious versus unconscious needs, general versus specific needs, current versus projected needs, critical versus routine needs, instructional versus noninstructional needs, economic versus noneconomic needs, needs for goods or products versus needs for services, easy-to-measure needs versus difficult-to-measure needs, and short-term or short-duration needs versus long-term or long-duration needs. Thinking in terms of such dimensions can be helpful for determining and setting the appropriate and desired boundaries of focus in planning for an assessment of needs. Thinking in such terms can also help one in setting needs assessment focus priorities within those boundaries.

Assessing Needs

As has been discussed, one must specifically determine whose needs, and what types of needs for each group, are to be assessed before plans are begun for conducting a needs assessment study. Now some important conceptual considerations relating to the conduct of the assessment itself will be discussed, briefly.

Models for Assessing Needs

A number of needs assessment models have been developed for use in the educational setting. Most, but not all, have been discrepancy based. Those developed at the elementary and secondary education levels have tended to be

general in their focus. Thus, some of the concepts and procedures they discuss may be useful also at the postsecondary level, for example: Coffing and Hutchinson (1974), English and Kaufman (1975), Hoepfner et al (1972), Klein et al (1971), Lewis (1973), New Jersey State Department of Education (1974), Read (1974), and the various other models reviewed by Adams (1976), Kaufman (1971), and Witkin (1975, 1976). Conversely, postsecondary education models have tended to be more diverse and specific in their focus: vocational, occupational, and continuing education needs (Adams, 1976; Brown, 1974; Keim and others, 1975; Putnam, 1970; Smith, 1968; Tucker, 1973); environmental needs (Aulepp and Delworth, 1976); course-level needs (Burton and Merril, 1977); community service needs (Central Florida Community College Consortium, 1973; Gollattscheck et al, 1976; League of California Cities, 1975; Selgas, 1977); needs of the handicapped student (Coffing, Hodson, and Hutchinson, 1974); community information and service needs (Gotsick, 1974); overall curricular needs (Gray, 1974; Hamilton, 1973; Pagels, 1973); administrative functioning needs (Higher Education Management Institute, 1977); prospective students' needs for institutional and program information (Kinnick and Lenning, 1976; Lenning and Cooper, 1978); state-level needs for career education (McCaslin and Lave, 1976); needs related to performance problems (Mager and Pipe, 1970); institutional goal needs (Peterson, 1976); curricular needs in programs for emergency ambulance personnel (Shook, 1969); and student financial aid needs (the models developed by ACT and CSS). Diverse and specialized models such as many of those above demonstrate the importance of tailoring concepts and procedures to the uniqueness of the conditions and situation. For example, an assessment of the curricular needs in a program for emergency ambulance personnel has to be quite different than one to assess curricular needs in a fine arts program, even though they are both focusing on curricualar needs and are both using a critical incident technique.

Several writers have attempted to classify needs assessment models into types that show relationships among them and distinguish among their emphases and

and characteristics. One way to classify needs assessment approaches is according to the purposes for which they are designed. For example, we can classify approaches according to those focusing on planning versus those focusing on policy formulation, those focusing on curriculum development versus institutional goal setting, and those aimed at understanding problems versus those aimed merely at identifying problems. Lenning, Cooper, and Passmore (forthcoming) identified 30 different general purposes served by needs assessment as discussed in the literature. (In differentiating model types, the League of California Cities (1975) grouped according to three broad, overall purposes: social policy, exploratory, and program needs assessments.) Furthermore, these purposes can vary according to the types of needs being assessed, whose needs are being assessed, who is doing the assessing and for whom, etc. Another way to classify needs assessment approaches is according to time of need being assessed, such as focusing on current needs versus focusing on projected needs (or both) or short-duration needs versus long-duration needs. Some additional model classification dimensions that could be useful are according to: population types being assessed, such as Baumheier and Heller's (1974) five population/purpose types - secondary data analysis, general population surveys, service population surveys, service provider surveys, and political and community surveys; breadth and detail of focus, such as the "narrow band" and "wide band" types of studies mentioned earlier; concreteness of the data collected, such as Anderson and Associates (1976) reference to "objective" and "subjective" needs assessments; approaches used for collecting data and conducting analyses, such as Kaplan's (1976) four strategy types and Scriven's (1977) categorization of common study types; and how the data are interpreted, such as Kaufman's (1972) inductive, deductive, and classical model differentiations.

Planning and Operational Considerations

Collecting valid and reliable evidence of need(s) is a necessary and crucial part of every needs assessment study. For any met and unmet need, a number of relevant indicators and measures usually apply. Generally, some will be better

indicators of the presence of the need than will others, and such factors as whose needs are being assessed can affect the validity of the indicator or measure. Therefore, multiple indicators and measures should be used whenever feasible. This gives increased assurance of validity (that it is a real need), if they all indicate the same thing about need, plus it facilitates tailoring the data collection system to different groups. When one measure is less valid, another measure may be more valid, and vice versa.

Currently, most need surveys are administered solely to the client groups whose needs are being assessed. It is important not to ignore client self-reports about their perceived needs, but other data are needed as well. Implications about need can also be derived from client reports about such things as school environment, their peers, disappointments or dissatisfactions, successes and achievements, activities, problems, and complaints. Baird (1976), for example, discusses the importance of identifying and remedying "brass tacks." Surveys should be administered to relevant others for their observations and judgments, also. They perhaps can be more objective, and may have more experience and expertise in making such judgments. Profiles showing how different groups view the situation can be quite revealing, and the pattern of similarities and discrepancies may significantly facilitate understanding about the needs.

When outcome needs are of concern, performance measures and history (trends) become very important, but self- and other-report data are still desirable also. Other useful supplemental data include frequency counts from institutional records concerning such things as attendance, complaints, amount of use (and ratings) of services, requests submitted for assistance of various kinds, etc. Similarly, statistics from governmental and other community agencies can provide useful supplemental evidence for studies of community needs. What others have found in similar types of institutions, programs, or locales can also be useful supplemental evidence if care is taken to examine closely how the other situations were similar and exactly how they were different from the one of concern. Concerning all of these types of data that have allready been collected (which some

have termed "secondary data"), although they save costs and time in addition to providing useful supplemental evidence, they can lead to trouble if great care is not taken in their use. Boyd and Westfall (1972) provide criteria for use in when particular secondary data are okay for a particular situation and use, and they also discuss precautions that can help one avoid the potential pitfalls.

Concerning data collection methods, needs assessors generally limit themselves to several traditional instruments: questionnaires, paper and pencil tests, and interviews. However, other instruments that may be just as reliable and valid for a particular case should be considered as alternatives and supplements for the traditional instruments. Lenning (1978) found fifty different methods in the literature that were recommended for assessments of various kinds, including needs assessments. Yet most needs assessors never even consider such nontraditional methods that have been shown to be practical, valid, reliable, and cost efficient for particular purposes and contexts. As with indicators and measures, and for the same reasons, the use of multiple data collection methods is desirable - and the large variety of data collection methods available can facilitate this.

Interpretation and use of needs data are also crucial elements in a needs assessment study, and too often the application of needs assessment results is ineffective. If needs data are going to have practical impact, the users of the needs assessment results must be precisely identified early in the assessment planning process, prior to conducting the study. Input should be solicited from them concerning their specific concerns and what needs information will be helpful to them in their decision making. Once analyses are completed, brief, concise reports tailored to each persons information needs should be sent to them. Additional ways to increas the impact of the results are also available (Lenning, Cooper, and Passmore, forthcoming).

Some needs assessment approaches only try to identify needs. Yet, more is needed: (2) a ranking of needs according to how critical they are, and (3) information that can help one to understand why the need occurred. In addition to not attempting to perform the last function above, almost all of the available

assessment models, even though they may rank the needs, make use of over-simple and ineffective decision rules that do not consider enough factors or consider each factor in isolation from the others. Another problem with many of the models is that they key so much on current goals and objectives that the results of such assessments are not useful for evaluating current institutional and program goals, for modifying or reformulating them, or for developing new goals to meet changing conditions. Lenning, Cooper, and Passmore (forthcoming) explore these problems in detail and discuss some possible solutions. They also provide in-depth and extended discussion about all of the other topics covered in this paper. Needs assessment clearly is a viable tool to assist administrators and faculty members who are concerned about meeting client and community needs. However, much more development in this area needs to take place before it can began to reach its full potential.

REFERENCES

Adams, K.A. National Large Cities Vocational Education Needs Study. Ph.D. dissertation, Ohio State University, 1976. The dissertation has been published as a research report under the same title by the Center for Vocational Education, Ohio State University, Columbus, Ohio.

Anderson, S.B., Ball, S., Murphey, R.T., & Associates. Encyclopedia of Educational Evaluation. San Francisco: Jossey-Bass, 1976.

Aulepp, LuAnne, & Delworth, E. Training Manual for an Ecosystem Model: Assisting and Designing Campus Environments. Boulder, Colo.: Western Interstate Commission for Higher Education, 1976.

Baird, L.L. Structuring the Environment to Improve Outcomes. In Improving Educational Outcomes: New Directions for Higher Education. Edited by Oscar T. Lenning. San Francisco: Jossey-Bass, 1976.

Beatty, P.T. A Process Model for the Development of an Information Base for Community Needs Assessment: A Guide for Practitioners. Paper presented at the annual meeting of the Adult Education Research Conference, Toronto: 1976, ED 128 616.

Bradshaw, J. The Concept of Social Need. New Society, 1972, 640-643.

Brown, B.W. Methods of Needs Assessment Used in Continuing Education Program Development at Two Year Colleges in the State of New York. 1974, ED 103 610.

Burton, J.K., & Merril, P.F. Needs Assessment: Goals, Needs, and Priorities. Unpublished paper. Lincoln, Nebraska: University of Mid-America, 1977. Draft of a chapter for a forthcoming book.

Coffing R.T., Hodson, W.A., & Hutchinson, T.E. A Needs Analysis Methodology for Education of the Handicapped, Final Report of Comm. Program No. 85-404. New Haven, Conn.: Area Cooperative Educational Services, 1973. Cited in Coffing and Hutchinson, 1974.

Coffing, R.T. & Hutchinson, T.E. Needs Analysis Methodology: A Prescriptive Set of Rules and Procedures for Identifying, Defining, and Measuring Needs. Paper presented at the annual convention of the American Educational Research Association, Chicago: 1974, ED 095 654.

Gotsick, P. Community Survey Guide for Assessment of Community Information and Service Needs. Public Library Training Institutes Library Service Guide Number Two. Morehead, Kentucky: Kentucky Applachian Adult Education Center, Morehead State University, 1974, ED 087 392.

Higher Education Management Institute. Needs Assessment and Planning: Managers Handbook. Preliminary Edition. Coconut Grove, Florida: Author 1977.

Hoepfner, R., Bradley, P.A., Klein, S.P., & Alkin, M.C. A Guidebook for CSE/Elementary School Evaluation Kit: Needs Assessment. Boston: Allyn and Bacon, 1972.

Kinnick, M.K. Information for Prospective Students About Postsecondary Education: A Partial Assessment of Need. Ph.D. dissertation, University of Colorado at Boulder, 1975. Dissertation Abstracts International 36 (8) (1975) 5085-A. Part of the dissertation has been published as a research report under the same title by the Office of Institutional Research, Portland State University, Portland, Oregon.

Kinnick, M.K., & Lenning, O.T. The Information Needs of Prospective Students. Unpublished resource paper, National Task Force on Better Information for Student Choice, 1976. Available from the National Center for Higher Education Management Systems.

Klein, S.P., Hoepfner, R., Bradley, P.A., Wooley, D., Dyer, J.S., & Strickland, G.M. Procedures for Needs-Assessment Evaluation: A Symposium. CSE Report No. 67. Los Angeles: Center for the Study of Evaluation, UCLA Graduate School of Education, 1971, ED 055 111.

League of California Cities. Assessing Human Needs. Sacramento, Calif.: Author, 1975.

Lenning, O.T. The Outcomes Structure: An Overview and Procedures for Applying it in Postsecondary Education Institutions. Boulder, Colo.: National Center for Higher Education Management Systems, 1977. (a)

Lenning, O.T. Previous Attempts to Structure Educational Outcomes and Outcome-Related Concepts: A Compilation and Review of the Literature. Boulder, Colo.: National Center for Higher Education Management Systems, 1977. (b)

Lenning, O.T. Assessing Student Educational Progress. ERIC/Higher Education Research Currents, 1978. In AAHE College and University Bulleton, 1978, 30(7), 3-6.

Lenning, O.T., Cooper, E.M., & Passmore, J.R. Identifying and Assessing Needs in Postsecondary Education: A Review and Synthesis of the Literature. Boulder, Colo.: National Center for Higher Education Management Systems, forthcoming.

Lenning, O.T. & Cooper, E.M. Guidebook for Colleges and Universities: Presenting Information to Prospective Students. Boulder, Colo.: National Center for Higher Education Management Systems, 1978.

Lenning, O.T., Lee, Y.S., Micek, S.S., & Service, A.L. A Structure for the Outcomes of Postsecondary Education. Boulder, Colo.: National Center for Higher Education Management Systems, 1977.

Lewis, J.L. Needs Assessment Guidelines. Columbus, Ohio: Ohio Department of Education, Division of Planning and Evaluation, 1973. Cited in Adams (1977) and Witkin (1975).

Maslow, A.H. Toward a Psychology of Being. 2nd ed. Princeton, N.J.: Van Nostrand, 1968.

Morgan, J.M. Conducting Local Needs Assessment: A Guide. TM Report 44. Princeton, N.J.: ERIC Clearinghouse on Tests, Measurement, and Evaluation, 1975, ED 117 188.

Murray, H.A. Proposals for a Theory of Personality. In Explorations in Personality: A Clinical and Experimental Study of Fifty Men of College Age. Edited by Henry A. Murray and Others. New York: Oxford University Press, 1938.

New Jersey State Department of Education. Goal Development in Education: A Planning Handbook for School Districts. Trenton, N.J.: Author, 1974.

Pagels, C.F. The Development of a Process for Determining Specific Criteria for a Student Needs Based Curriculum, Ph.D. dissertation, University of Virginia, 1973. Dissertation Abstracts International, 34 (10) 1974, 6368-A.

Parsons, T. The Social System. Glencoe, Ill.: Free Press, 1951. (See the chapter Functional Prerequisites of a Society by D.F. Aberle et. al.)

Read, B. ESA Needs Assessment Procedure Manual. Austin, Texas: Educational Systems Associates, 1974. Cited in Adams (1977).

Scriven, M. Special Feature: Needs Assessment. Evaluation News No. 1 (1977) 25-28. Available from Program Development Center. Aymer I. Hamilton Building, California State University--Chico, Chico, Calif. 95929.

Witkin, B.R. Needs Assessment Models: A Critical Analysis. Paper presented at the annual convention of the American Educational Research Association, San Francisco: 1976.

Witkin, B.R. An Analysis of Needs Assessment Techniques for Educational Planning at State, Intermediate, and District Levels. Hayward, Calif.: Office of the Alameda County Superintendent of Schools, 1975, ED 108 370.